

UNITED STATES DISTRICT COURT  
DISTRICT OF MINNESOTA

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BREATHABLEBABY, LLC,

Case No. 12-CV-0094 (PJS/TNL)

Plaintiff,

v.

*MARKMAN* ORDER

CROWN CRAFTS, INC., a Delaware  
corporation; and CROWN CRAFTS  
INFANT PRODUCTS, INC., a Delaware  
corporation,

Defendants.

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Erik G. Swenson, George Washington Jordan, III, and Laura J. Borst, FULBRIGHT & JAWORSKI LLP, for plaintiff.

Ruth A. Rivard and Katherine A. Moerke, LEONARD, STREET AND DEINARD, P.A.; Joshua P. Gunnemann and Phillip S. McKinney, ROGERS & HARDIN LLP, for defendants.

This matter is before the Court for construction, in accordance with *Markman v. Westview Instruments, Inc.*, of four terms found in U.S. Patent No. 7,055,192 (“the ‘192 patent” or “the patent”). 517 U.S. 370, 390-91 (1996). The parties prepared a joint claim-construction statement, and each side submitted two briefs (opening and response) on claim-construction issues. The Court held a *Markman* hearing on May 1, 2013.

## I. BACKGROUND

Plaintiff BreathableBaby, LLC (“BreathableBaby”) brings suit against defendants Crown Crafts, Inc. and Crown Crafts Infant Products, Inc. (collectively “Crown Crafts”) for infringement of the ‘192 patent. Roughly speaking, the ‘192 patent covers a mesh crib-shield system — more commonly referred to as a “crib liner” — designed to prevent infants from

sticking their limbs through the sides of their cribs. The patented crib liner is comprised of a mesh fabric, so that infants will not suffocate if their noses or mouths come into contact with the liner. The parties ask the Court to construe four terms used in claims 1 or 9 of the patent: (1) “side rail,” (2) “top bar,” (3) “substantial portion,” and (4) “substantially formed” and “formed substantially” (which the parties agree are equivalents, *see* ECF No 73 at 33; ECF No. 76 at 21-22).

## II. GENERAL PRINCIPLES

Courts, not juries, construe patent claims. *Markman*, 517 U.S. at 391. Language in a particular claim must be construed in the context of both that individual claim and the entire patent, including the specification. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). Indeed, the specification, read in light of the prosecution history, is the primary basis for construing patent claims. *Id.* at 1315. Courts may also rely on “extrinsic evidence” — anything other than the patent and its prosecution history — but that evidence is secondary to the intrinsic evidence. *Id.* at 1317. In general, claim language means whatever it would have meant, ordinarily and customarily, to a person of ordinary skill in the relevant art at the time the patent application was filed. *Id.* at 1312-13. In some cases, the ordinary and customary meaning of claim language to a person of ordinary skill in the art may be identical to the meaning of that language to a lay person who is not skilled in the art. *Id.* at 1314.

## III. CLAIM CONSTRUCTION

The parties have not argued that someone of ordinary skill in the art would interpret any of the disputed language differently than would an educated lay person. The parties’ claim-construction arguments, far from being based on specialized knowledge, focus on the ‘192 patent

itself and definitions from general-purpose dictionaries. The Court therefore construes the terms as would an ordinary educated layperson who had access to the materials cited by the parties.

*A. Term 1: “side rail”*

The Court construes the term “side rail” as that term is used in both claims 1 and 9 of the ‘192 patent to mean “one of the two sides of a crib that extend between the headboard and the footboard.”

Claims 1 and 9 both disclose a “crib shield system for a crib,” ‘192 patent col. 17:2, 18:10 [ECF No. 1-1],<sup>1</sup> and both claims describe a “crib” as comprising “a first and second side rail, a headboard, and a footboard connected and sized for receiving a mattress therein,” *id.* at 17:3-5; 18:10-12. Neither BreathableBaby nor Crown Crafts argues — or at least argues convincingly — that there is anything ambiguous about the term “side rail.” The parties essentially agree that, in the context of the four-sided crib described in claims 1 and 9, the “side rails” are the two sides that extend between the headboard and the footboard.

The parties nevertheless ask the Court to construe “side rail” because the parties disagree about whether a corner post can ever be incorporated into a side rail. BreathableBaby points out that there are dozens — if not hundreds — of crib designs. Some include corner posts and some do not. In some of the designs that include corner posts, the corner posts are stand-alone — i.e., they are not incorporated into any of the four sides of the crib. In other designs that include corner posts, one or more of the corner posts are incorporated into (that is, made a part of) a side of the crib. BreathableBaby argues that nothing in the patent limits “side rail” to designs in which a corner post is not incorporated into a side rail.

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<sup>1</sup>To improve readability, this order will not include numbers that refer to the drawings when quoting the ‘192 patent, except when necessary to avoid ambiguity.

Crown Crafts disagrees. It argues that, although a corner post can be incorporated into a headboard or a footboard, it can *never* be incorporated into a “side rail,” as that term is used in the patent. In support of its argument, Crown Crafts points to Figure 1, which “shows a perspective view of one embodiment of a low crib shield system attached to a crib with a side rail of the crib in a raised state.” *Id.* at 4:65-67. The crib depicted in Figure 1 “includes two side rails, a footboard, and a headboard.” *Id.* at 5:55-56. The side rails of the crib are described as “generally includ[ing] a top bar and a bottom bar,” along with “[a] plurality of generally vertically-spaced side support elements” extending between the top and bottom bars. *Id.* at 6:10-13. The headboard and footboard of the crib are described similarly to the side rails, but unlike the side rails, “[t]he footboard is configured in a manner like that of [the] headboard *and includes corner posts.*” *Id.* at 6:45-46 (emphasis added). Crown Crafts argue that because corner posts are described as being incorporated into a footboard in one drawing in the patent, corner posts can never be incorporated into side rails.

The problem with Crown Crafts’ argument is obvious. The Federal Circuit has repeatedly warned that patent claims are not to be limited to preferred embodiments. *See, e.g., Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1122 (Fed. Cir. 2004) (“[T]he law does not require the court, where an applicant describes only a single embodiment, to construe the claims as limited to that one embodiment. Indeed, such a construction is not encouraged or presumed.”) (citation omitted). Relatedly, the Federal Circuit has also repeatedly warned that patent claims are not to be limited to the embodiments depicted in a patent’s drawings. *See, e.g., Playtex Prods., Inc. v. Procter & Gamble Co.*, 400 F.3d 901, 907 (Fed. Cir. 2005) (“The drawings do not compel a contrary result. By its reliance on the

figures, the district court improperly limited claim 1 to a preferred embodiment. We have consistently advised against this approach to claim construction.”). That is precisely what Crown Crafts seeks to do: add a limitation (“no corner post”) to a claim term (“side rail”) based on the way a drawing in the patent depicts a crib in which an embodiment of the invention is installed.

Nothing in the patent suggests that it is impossible for a side rail to include a corner post. The specification refers to corner posts on several occasions, but mostly in the context of describing embodiments of the invention being attached to or near corner posts or being woven around corner posts. *See* ‘192 patent col. 11:15, 11:26, 11:30, 11:43, 12:42, 12:64. Only in its description of the crib depicted in Figure 1 does the specification discuss the relationship between the four sides of the crib and corner posts. The specification says the following:

*As to the footboard:* As noted, the specification describes the footboard depicted in Figure 1 as “includ[ing] corner posts.” *Id.* at 6:46.

*As to the headboard:* Although the headboard depicted in Figure 1 appears to be identical to the footboard depicted in Figure 1, the specification does not describe the headboard as “including” corner posts. Instead, the specification says that the headboard depicted in Figure 1 “includes an upper bar . . . as well as a bottom horizontal element, each *connected* in a fixed position *to* corner posts.” *Id.* at 6:35-38 (emphasis added).

*As to the side rails:* The specification also does not describe the side rails depicted in Figure 1 as “including” corner posts. Instead, the specification says that the side rails “may . . . be in a stationary position fixedly *attached to* corner posts.” *Id.* at 6:27-28 (emphasis added).

That is the sum total of the patent’s discussion of the relationship between corner posts and the four sides of the crib. Crown Crafts concedes that corner posts can be incorporated into a

headboard, even though the patent only describes the incorporation of corner posts into a footboard. And yet Crown Crafts cannot explain why corner posts cannot also be incorporated into a side rail, given that the patent's description of the relationship between corner posts and headboards is substantively identical to its description of the relationship between corner posts and side rails.

Crown Crafts does note that the patent repeatedly refers to drop-side cribs — that is, cribs in which at least one side rail moves up and down. *See, e.g., id.* at 6:14-18 (“The side rail in many conventional cribs is moveable from a raised state to a lowered state. For example, the moveable side rail allows a user to lower the side rail in order to have easier access to a child lying on [the] mattress.”). Crown Crafts points out that, if a corner post were part of a side rail, the side rail could not drop down. That is true, but it simply reflects BreathableBaby's point: Cribs are designed in many ways, and in some designs (such as designs featuring moveable side rails) corner posts are not incorporated into a side rail. That does not mean, however, that corner posts can never be incorporated into side rails.

Crown Crafts also points out that the patent highlights the fact that “[t]he present invention allows for the side rail to be moved from a lowered state to a raised state, or vice versa, even with the crib shield system attached to the crib.” *Id.* at 6:20-23. Crown Crafts argues that, if the side panels of the crib-shield system are attached to corner posts, the side rails cannot move up and down. It is difficult to understand how this argument is supposed to prove that corner posts can never be incorporated into side rails. The patent in no way suggests that side rails *must* be moveable; to the contrary, the patent explicitly contemplates that the invention may be used in cribs in which the side rails are stationery. *See id.* at 6:24-29 (“Side rail 14 may be similarly

configured like that of side rail 12. In other words, side rail 14 may be moveable from a lowered to a raised state, and vice versa. However, side rail 14 may also be in a stationary position fixedly attached to corner posts 36, 31. Likewise, side rail 12 may be moveable or in a fixed position.”). Crown Crafts suggests no reason why, in cribs whose side rails do not move, the corner posts cannot be incorporated into those side rails.

In short, the construction of “side rail” advocated by Crown Crafts would add a limitation (“does not include the four corner posts of a crib, which are instead part of the headboard and footboard of a crib”) that is not found anywhere in the patent, the other intrinsic evidence, or, for that matter, any extrinsic evidence. It may well be that few if any cribs are in fact designed to incorporate corner posts into side rails. But nothing in the record supports Crown Crafts’ argument that a “side rail,” as used in claims 1 and 9, can *never* incorporate a corner post.

*B. Term 2: “top bar”*

Crown Crafts asked the Court to construe the term “top bar” — which appears in both claims 1 and 9 of the ‘192 patent — because it believed that BreathableBaby was taking the position that the support slats along the side rail of a crib could be considered part of the top bar. But BreathableBaby made clear during the *Markman* hearing that it is not taking such a position. Hr’g Tr. at 61-62 [ECF No. 87]. The Court agrees with the parties that the support slats — or, as claims 1 and 9 describe them, “spaced support elements” — of a side rail are distinct from the top bar of a side rail. The jury will understand this as well.

*C. Term 3: “substantial portion”*

The Court construes the term “substantial portion” as that term is used in claim 1 of the ‘192 patent to mean “at least two-thirds.”

Claim 1 describes a crib-shield system in which each side panel is “configured . . . to cover at least a substantial portion of a corresponding side rail with a mesh-type material . . . .” ‘192 patent col. 17:9-11. The specification explicitly defines “substantial portion”: “As used herein, when referring to the covering of a substantial portion of a side rail . . . at least two-thirds of the side rail is covered.” *Id.* at 12:11-13. Clearly, the patentees acted as their own lexicographers, and just as clearly, the Court is required to adopt their definition of “substantial portion.” *See Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322, 1329 (Fed. Cir. 2009) (“Similarly, we will adopt a definition that is different from the ordinary meaning when the patentee acted as his own lexicographer and clearly set forth a definition of the disputed claim term in either the specification or prosecution history.”) (quotation omitted).

That should be the end of the matter. But BreathableBaby argues that, for purposes of claim 1, a “substantial portion” of a side rail is covered when “[a]t least two-thirds of a *piece*” of the side rail is covered [ECF No. 76 at 24 (emphasis added)], even if less than two-thirds of the *entire* side rail is covered. Although not entirely clear, BreathableBaby’s argument — at least in its briefing — seems to be that a substantial portion of a side rail is covered when a mesh-type material extends at least two-thirds of the way along the *length* (or, presumably, the *height*) of the side rail, regardless of the width of the material. In other words, according to BreathableBaby, a quarter-inch-wide strip of mesh-type material that ran along the entire length (or height) of a side rail would “cover at least a substantial portion of [the] . . . side rail” for purposes of claim 1, ‘192 patent col. 17:9-10, even though almost all of the side rail would remain uncovered.

In support of this rather unlikely construction, BreathableBaby points to Figure 1, which depicts a crib whose mattress sits approximately midway between the top and bottom bars of the

crib's side rails. The side panels of the depicted crib-shield system cover only the portions of the side rails that sit above the mattress. It is unclear exactly how much of the entire side rails are covered by mesh-type material, but it appears to be less than two-thirds. According to BreathableBaby, Figure 1 demonstrates that a "substantial portion" of a side rail can be covered by a mesh-type material even when less than two-thirds of the *entire* side rail is covered, because construing the term "substantial portion" otherwise "would improperly disregard Figure 1 of the '192 Patent." ECF No. 76 at 26.

BreathableBaby's argument suffers from several problems, only a couple of which need to be mentioned. First, only claim 1 — and not claim 9 — discloses a crib-shield system in which "at least a substantial portion of a . . . side rail" is covered with a mesh-type material. '192 patent col. 17:10-11. But Figure 1 does not depict the invention disclosed in claim 1; instead, it depicts the invention disclosed in claim 9, which merely requires the side panel of the crib liner to "cover at least a *portion* of the first side rail and to extend along substantially the length of the crib." *Id.* at 18:18-20 (emphasis added). *See also id.* at 18:31-33. Figure 1 thus tells us nothing about what the phrase "substantial portion" means in claim 1.<sup>2</sup> Second, even if Figure 1 purported to depict the invention disclosed in claim 1 — which, again, it does not — the Court would commit "one of the cardinal sins of patent law" if it were to read a limitation into claim 1

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<sup>2</sup>In its briefing, BreathableBaby itself identifies Figure 1 as a depiction of the invention disclosed in claim 9, and not as a depiction of the invention disclosed in claim 1. *See* ECF No. 76 at 9. (The invention disclosed in claim 1 appears to be depicted in Figure 4, in which mesh-type material covers virtually all of the side rails.) The Court agrees. For example, claim 1 discloses a crib-shield system in which "each of the first and second side panels comprises at least one fastening apparatus that extends along an entire edge of the side panel to attach the side panel to the top bar of a corresponding side rail . . . ." '192 patent col. 17:14-18. Yet the side panels depicted in Figure 1 do not include a fastening apparatus that extends along the entire edge of the side panel and attaches to the top bar of the corresponding side rail.

based on that drawing. *See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1340 (Fed. Cir. 2001) (describing “one of the cardinal sins of patent law — reading a limitation from the written description into the claims”). Finally, a “claim must be interpreted in light of the . . . purpose of the invention described therein.” *Apple Computer, Inc. v. Articulate Sys., Inc.*, 234 F.3d 14, 25 (Fed. Cir. 2000). The purpose of the invention disclosed in claim 1 is to protect infants from being harmed by, for example, getting their limbs caught between crib slats. *See* ‘192 patent col. 1:15-22. If, as BreathableBaby argues, the substantial-portion limitation of claim 1 could be met by running a quarter-inch-wide strip of mesh-type material along an edge of a side rail, then the invention would fail to achieve its purpose.<sup>3</sup>

The Court defines “substantial portion” precisely as the specification defines it: “As used herein, when referring to the covering of a substantial portion of a side rail . . . at least two-thirds of the side rail is covered.” *Id.* at 12:11-13. Thus, a “substantial portion” of a side rail is covered with a mesh-type material when at least two-thirds of that (entire) side rail is covered with a mesh-type material.

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<sup>3</sup>At oral argument, BreathableBaby appeared to propose another possible construction of “substantial portion.” BreathableBaby seemed to suggest that, because the purpose of the invention is to keep infants from poking their limbs through the support slats, the Court should construe “a substantial portion of a . . . side rail” to mean “a substantial portion of that *part* of the side rail that sits above the mattress” or perhaps to mean “a substantial portion of that *part* of the side rail through which an infant could poke a limb.” But BreathableBaby waived this argument by failing to raise it until oral argument. Moreover, BreathableBaby’s alternative constructions are flatly inconsistent with the patent’s own definition of “substantial portion,” which refers to the entire side rail, and not to a particular portion of the side rail. *Cf. Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 952 (Fed. Cir. 2006) (“Preamble language that merely states the purpose or intended use of an invention is generally not treated as limiting the scope of the claim.”).

*D. Term 4: “substantially formed” and “formed substantially”*

The Court finds that it need not construe the terms “substantially formed” and “formed substantially” as those terms are used in claim 9 of the ‘192 patent. Those terms have their ordinary meaning, and the Court finds that paraphrasing or restating that ordinary meaning would not be helpful and is not necessary.

Claim 9 discloses a “first panel” that is “formed substantially of a mesh-type material,” ‘192 patent col. 18:20-21, and a “second panel” that is “substantially formed of a mesh-type material,” *id.* at 18:33-34. Crown Crafts proposes construing “formed substantially” and “substantially formed” to mean that “[a]t least two-thirds of the exposed portion of the panel is made of a mesh-type material.” ECF No. 73 at 33. The sole basis for Crown Crafts’ proposed construction is the following passage from the specification:

[P]referably, substantially the entire exposed portions of the panels (e.g., exposed to a child in the crib) are formed of the mesh-type material.

As used herein, when reference is made to the panels having substantially the entire exposed portions thereof being formed of the mesh-type material, it means that at least two-thirds of the exposed portions are formed thereof.

‘192 patent col. 14:3-9. Crown Crafts argues that the patentees acted as their own lexicographers in this passage, defining “substantially . . . formed” as always meaning “at least two-thirds formed.”

But Crown Crafts elides too much. The passage cited by Crown Crafts does not define “substantially . . . formed”; it defines the phrase “the panels having substantially the entire exposed portions thereof being formed . . . .” *Id.* at 14:6-8. In other words, the passage defines only one specific instance in which “substantially . . . formed” is used in the patent, and it

identifies that instance: “when reference is made to the panels having substantially the entire exposed portions thereof being formed of the mesh-type material.” *Id.*

Claim 9, however, makes no reference to “substantially the entire exposed portions [of the panels] being formed of the mesh-type material.” *Id.* at 7-8. Instead, claim 9 refers to the panels *as a whole* — not the exposed portions thereof — being substantially formed of a mesh-type material. The definition cited by Crown Crafts is therefore unhelpful in construing “substantially formed” as that term is used in claim 9.

The patent uses the phrase “substantially formed” or “formed substantially” on a number of occasions. In two contexts — the context cited by Crown Crafts and one other<sup>4</sup> — the term is defined as meaning at least two-thirds formed. In other contexts — such as the context in which the term is used in claim 9 — “substantially formed” is left undefined. The patentees easily could have defined “substantially formed” to mean “at least two-thirds formed” in *all* contexts, either through one universal definition for the term, or by repeating the “at least two-thirds formed” definition in each context in which “substantially formed” is used. Thus, the fact that the patent equates “substantially formed” with “at least two-thirds formed” only *sometimes* indicates that “substantially formed” was meant to have a different meaning — its ordinary (less precise) meaning — when the term is not defined.

The same could be said of the word “substantially.” The patent uses the word “substantially” on numerous occasions, but only in certain contexts is the term defined. *See id.* at 12:11-13 (“As used herein, when referring to the covering of a substantial portion of a side rail

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<sup>4</sup>*See* ‘192 patent col. 15:59-65 (stating that where an apparatus is said to be substantially formed of a “breathable integrated padded mesh material,” the apparatus is at least two-thirds formed of that material).

(or headboard or footboard[]), at least two-thirds of the side rail is covered.”). In other contexts in which the term is used, it remains undefined, indicating that the term is to be given its ordinary (less precise) meaning. *See id.* at 8:57-59.

The Court concludes that the terms “substantially formed” and “formed substantially” carry their ordinary meaning when the terms are left undefined, as they are in claim 9. The ordinary meaning of “substantially” — as reflected in various general-purpose dictionaries — is “considerably,” “largely,” or “amply.” *See, e.g., American Heritage Dictionary of the English Language* 1727 (4th ed. 2000). Nothing would be accomplished by substituting one of these synonyms for “substantially” (e.g., “considerably formed” or “formed largely”), and nothing in the record supports reading a precise numerical limitation into “substantially formed” or “formed substantially.” Accordingly, the Court will not construe “substantially formed” or “formed substantially,” as those terms are used in claim 9.

#### IV. CONCLUSION

In light of the ‘192 patent’s specification (including the claims), the purpose of the patent as disclosed in the intrinsic evidence, the ordinary meaning of the claim language, relevant extrinsic evidence, and the parties’ arguments, the Court construes the disputed claim language as stated above.

Dated: September 17, 2013

s/Patrick J. Schiltz  
Patrick J. Schiltz  
United States District Judge